

REMARKS

With entry of the present amendment, claims 21 - 38 are pending. Original claims 1 - 20 have been canceled, without prejudice, and Applicants retain the right to file further continuation applications on the non-elected claims and on the subject matter of any claim presently canceled. Pending claims 21, 29 and 33 are independent claims. New matter has not been introduced by the new claims.

In the Office Action mailed May 20, 2003, the Examiner required restriction of the claims to the following groups:

Group I - claims 1 - 17, drawn to a method for preparing an improved *Enterobacteriaceae* strain and improved strains obtained according to the method;

Group II - claim 18 drawn to an isolated nucleic acid comprising the sequence set forth in SEQ ID NO: 1;

Group III - claim 19 drawn to an isolated nucleic acid comprising the sequence set forth in SEQ ID NO: 2; and

Group IV - claim 20 drawn to an isolated polypeptide comprising the sequence set forth in SEQ ID NO: 3.

Applicants confirm the election of Group I and acknowledge the withdrawal of the previous restriction between groups II and III. Claims directed to the non-elected invention have been canceled. While Applicants have also canceled the elected claims, Applicants assert the newly submitted claims are directed to essentially the same subject matter as the elected claims.

New independent claim 21 is directed to a method for obtaining an improved *Enterobacteriaceae* strain. The *Enterobacteriaceae* progenitor strain is selected from the genera of *Pantoea*, *Enterobacter*, *Erwinia* and *Gluconobacter* and the cryptic plasmid is defined by a nucleic acid sequence having at least 90% sequence identity with SEQ ID NO:1 or SEQ ID NO:2. Support is found in original claims 1, 2, and 5 and also at page 4 of the disclosure.

Claims 22 - 28 depend from claim 21 and find support *inter alia* in the original claims. More specifically, claim 22 directed to progenitor strains which are capable of producing 2,5-diketo-D-gluconate (2,5-DKG) from a carbon source, finds support in original claim 4; claim 23 directed to a recombinant strain comprising a heterologous nucleic acid sequence encoding a 2,5-diketo-D-gluconate reductase (2,5-DKGR) finds support in original claim 5; claim 24 directed to an open reading frame of

the nucleic acid sequence of the cryptic plasmid encoding an amino acid sequence having the sequence of SEQ ID NO:3, finds support in claim 20 and at page 4 of the disclosure; claim 25 directed to a progenitor strain which is *Pantoea citrea* having ATCC accession number 31940 finds support in original claim 3 and 7; claim 26 directed a cryptic plasmid having the specific nucleic acid sequence of SEQ ID NO:1 or SEQ ID NO:2 finds support in original claim 6; claim 27 directed to the improved *Enterobacteriaceae* strain obtained according to the method finds support in original claims 8 and 16; and claim 28 which recites that the improved strain is a *Pantoea* strain finds support in original claims 17.

New independent claim 29 is directed to a method for reducing the mobilization properties of plasmids residing within an *Enterobacteriaceae* strain finds support in original claims 9 and 14 and at page 4 of the disclosure.

Claims 30 - 32 depend from claim 29 and find support in the original claims. More specifically, claim 30 is directed to an *Enterobacteriaceae* strain from the genera of *Pantoea*, *Enterobacter*, *Erwinia* or *Gluconobacter*, and support is found in original claim 12; claim 31 is directed to a progenitor strain which is capable of producing 2,5-diketo-D-gluconate (2,5-DKG) from a carbon source and support is found in original claim 10; and claim 32, which is directed to a recombinant strain that comprises a heterologous nucleic acid sequence encoding a 2,5-diketo-D-gluconate reductase (2,5-DKGR), finds support in original claim 11.

New independent claim 33 recites a method for obtaining an improved *Pantoea* strain comprising obtaining a *Pantoea* strain which includes a cryptic plasmid said cryptic plasmid having a nucleic acid sequence with at least 90% sequence identity to SEQ ID NO: 1 or SEQ ID NO: 2, and eliminating the cryptic plasmid from the *Pantoea* strain thereby obtaining an improved *Pantoea* strain. Support is found in original claims 1, 2, 3, 6 and page 4 of the disclosure.

Claims 34 - 38 depend from claim 33 and also find support *inter alia* in the original claims. More specifically, claim 34 recites that the *Pantoea* strain is a *Pantoea citrea* strain and claim 35 recites that the *Pantoea* strain is a recombinant strain. Support is found in original claims 3 and 5. Claim 36 recites a cryptic plasmid, having a nucleic acid sequence with at least 95% sequence identity to SEQ ID NO:1 or SEQ ID NO:2. Support is found at page 4 of the disclosure. Further dependent claims

36 and 37 are directed to the *Pantoea* strain obtained according to the method and support is found in original claim 17.

Original claims 1 - 17 were rejected under 35 U.S.C. §112, first paragraph as not complying with both the written description requirement and the enablement requirement. These claims have been canceled. While not acquiescing with the Examiner concerning the rejection of the original claims, to expedite prosecution of this application, Applicants have presented new claims 21 - 38 and contend these claims comply with both the written description requirement and the enablement requirement.

Applicants contend one skilled in the art, along with the teachings of the present disclosure, could determine without undue experimentation whether or not an *Enterobacteriaceae* strain and particularly a strain of a *Pantoea*, *Enterobacter*, *Erwinia* or *Gluconobacter*, comprise a plasmid having at least 90% sequence identity with the nucleic acid sequence of pS and further whether or not elimination of the plasmid from the progenitor strain would produce an improved *Enterobacteriaceae* strain.

Applicants have concurrently submitted herein formal drawings.

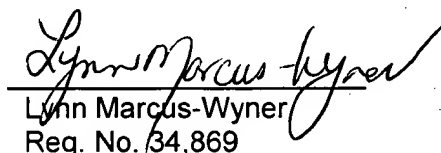
It is believed that the newly presented claims are in condition for allowance.

If in the opinion of the Examiner a telephone conference would expedite the prosecution of the subject application, the Examiner is encouraged to call the undersigned at (650) 846-7620.

Respectfully submitted,

Date: December 22, 2003

Genencor International, Inc.
925 Page Mill Road
Palo Alto, CA 94304-1013
Tel: 650-846-7620
Fax: 650-845-6504


Lynn Marcus-Wyner
Reg. No. 34,869